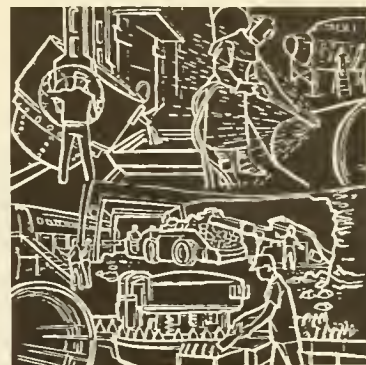


A UNITED STATES  
DEPARTMENT OF  
COMMERCE  
PUBLICATION

CURRENT INDUSTRIAL REPORTS

# Manufacturers' Shipments, Inventories and Orders

September 1969



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## NEW ORDERS

New orders for manufactured products rose \$2.1 billion in September to \$56.9 billion from \$54.8 billion in August after seasonal adjustment, the Bureau of the Census, U.S. Department of Commerce, announced today. Durable goods rose \$1.7 billion to \$32.2 billion from \$30.5 billion in August, and nondurable goods rose \$400 million to \$24.7 billion from \$24.3 billion in August. Within the durable goods sector, increases were widespread although electrical machinery registered a small decline. Significant increases occurred in the steel mills component of primary metals and in engines and turbines among the nonelectrical machinery industries. Transportation equipment registered an increase of \$300 million with declines in aircraft more than offset by increased orders in the other segments of the transportation sector.

Among the supplemental series, orders for the machinery and equipment industries rose \$1.1 billion from \$6.2 billion in August to \$7.3 billion, primarily because of the sizeable increase in engines and turbines and shipbuilding equipment. Consumer durables increased to \$2.1 billion in September whereas defense products showed virtually no change. (SEE CHART 1)

## SHIPMENTS

Manufacturers' shipments in September rose \$1.2 billion to \$56.4 billion from \$55.2 billion in August. Nondurable goods increased \$400 million and durable goods \$800 million. Increases occurred across all industry groups except electrical machinery and textiles. In the durable goods sector, the largest increases occurred in the metals and nonelectrical machinery industries. (SEE CHART 2)

Chart 1—Manufacturers' New Orders (Seasonally Adjusted)

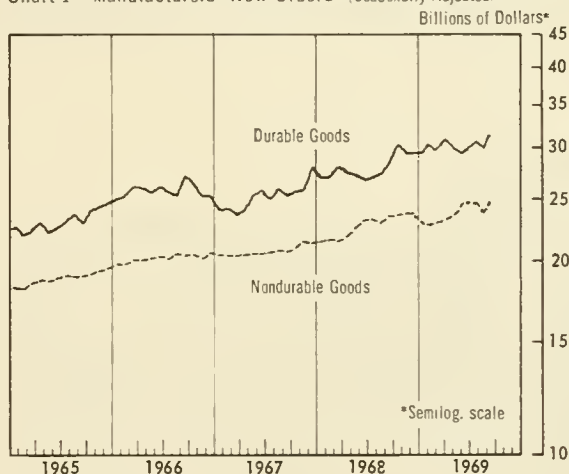
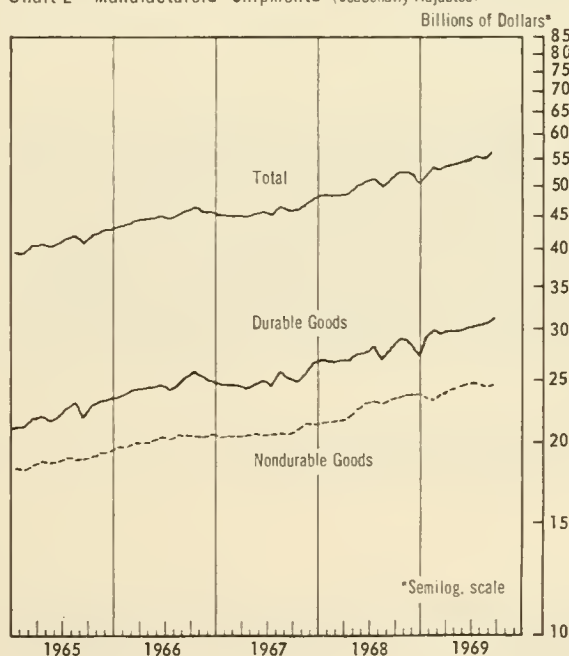


Chart 2—Manufacturers' Shipments (Seasonally Adjusted)



For sale by the Bureau of the Census, Washington, D.C. 20233. Price 15 cents - \$1.50 per year.

U.S. DEPARTMENT OF COMMERCE Maurice H. Stans, Secretary

Rocco C. Siciliano, Under Secretary

Harold C. Passer, Assistant Secretary for Economic Affairs

BUREAU OF THE CENSUS George Hay Brown, Director

## UNFILLED ORDERS

Unfilled orders for durable goods rose \$500 million to \$86.5 billion in September from \$86.0 billion in August. Increases in backlogs occurred in most industries with significant rises occurring in primary metals and nonelectrical machinery. Declines in backlog occurred in electrical machinery and the aerospace component of the transportation industry. The unfilled orders to shipments ratio for durable goods industries overall declined to 3.08 in September from 3.15 in August since in most industries, increases in shipments exceeded those for unfilled orders. (SEE CHART 3)

## INVENTORIES

Total inventories held by all manufacturers at the end of September increased nearly \$500 million to \$94.2 billion from \$93.7 billion at the end of August. Both the durable and nondurable goods sectors registered increases which were spread rather evenly across industry groups. Increases occurred in all stages of fabrication although the largest increase of \$300 million occurred in work-in-process inventories. As a result of the overall greater increase in shipments than in total inventories, the inventories to shipments ratio declined to 1.67 in September from 1.70 in August. (SEE CHART 4)

The figures on the durable goods industries in this report supersede those issued earlier in the advance report on durable goods. The advance report is based on a tabulation of early reports and is limited to statistics on shipments, new orders, and unfilled orders for a few broad industry categories. The present report is based on more complete reporting, but the estimates are also considered preliminary. Final figures will appear as historical data in the report to be published for next month.

For an explanation of terms used in this report see appendix following table 5.

Inquiries concerning these figures should be addressed to the U.S. Department of Commerce, Bureau of the Census, Industry Division, Washington, D.C. 20233.

Chart 3—Manufacturers' Unfilled Orders (Seasonally Adjusted)  
Billions of Dollars\*

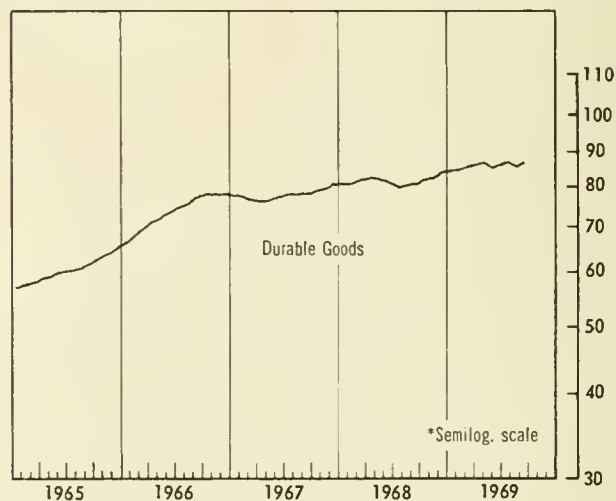


Chart 4—Total Inventory (Seasonally Adjusted)  
Billions of Dollars\*

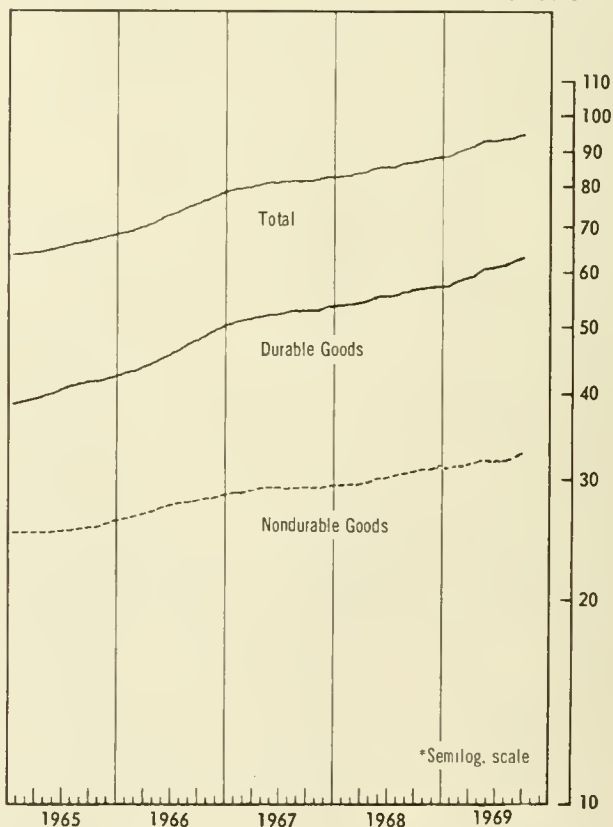


Table 1.--VALUE OF MANUFACTURERS' SHIPMENTS, INVENTORIES, AND ORDERS, BY INDUSTRY GROUP  
(Millions of dollars)

Industry group	Seasonally adjusted			Without seasonal adjustment <sup>1</sup>			Seasonally adjusted			Without seasonal adjustment		
	Sept. 1969 <sup>b</sup>	Aug. 1969 <sup>r</sup>	July 1969 <sup>r</sup>	Sept. 1969 <sup>b</sup>	Aug. 1969 <sup>r</sup>	Sept. 1968	Sept. 1969 <sup>b</sup>	Aug. 1969 <sup>r</sup>	July 1969	Sept. 1969 <sup>b</sup>	Aug. 1969 <sup>r</sup>	Sept. 1968
	Shipments						Total inventories					
All manufacturing industries:												
Total.....	56,406	55,239	55,392	57,969	53,401	52,950	94,209	93,728	93,166	93,411	93,262	86,409
Total, excluding transportation.....	48,155	47,119	47,476	49,866	47,099	45,883	79,070	78,551	78,012	78,182	78,110	72,393
Durable goods industries, total.....	31,707	30,868	30,605	32,154	28,745	28,404	62,006	61,724	61,441	61,612	61,541	56,141
Stone, clay, and glass products.....	1,497	1,414	1,388	1,613	1,531	1,449	2,468	2,453	2,463	2,388	2,419	1,964
Primary metals, total.....	4,976	4,739	4,777	4,903	4,584	3,912	7,939	7,907	7,800	7,925	7,873	7,488
Blast furnaces, steel mills.....	2,311	2,176	2,238	2,244	2,143	1,579	4,263	4,234	4,185	4,272	4,209	4,073
All other primary metals.....	2,665	2,563	2,539	2,659	2,436	2,333	3,676	3,673	3,615	3,653	3,664	3,415
Fabricated metal products, total.....	3,211	3,036	3,088	3,330	3,135	2,965	6,434	6,371	6,407	6,365	6,394	6,056
Metal cans, barrels, and drums.....	294	281	296	334	343	321	687	684	684	670	702	620
Machinery, except electrical, total.....	5,712	5,504	5,261	5,644	5,095	5,029	12,670	12,606	12,542	12,534	12,485	11,085
Engines and turbines.....	671	591	461	641	494	428	930	939	953	914	934	838
Farm machinery and equipment.....	478	451	459	454	392	418	949	960	944	906	919	912
Construction, mining, and material handling equipment.....	694	646	664	684	624	688	2,170	2,148	2,127	2,129	2,105	1,896
Metalworking machinery.....	336	324	316	339	304	369	1,066	1,056	1,074	1,071	1,060	1,007
General industrial machinery.....	515	510	472	522	500	458	1,056	1,037	1,031	1,048	1,031	895
Electrical machinery, total.....	3,849	3,863	3,930	4,072	3,739	3,754	9,185	9,086	9,044	9,074	9,088	8,397
Electrical transmission and distribution equipment and industrial apparatus.....	729	727	712	764	690	697	1,906	1,883	1,873	1,888	1,874	1,760
Household appliances, including radio and TV.....	777	789	880	883	828	842	2,120	2,081	2,039	2,037	2,074	1,908
Communication equipment.....	1,053	1,119	1,110	1,090	1,040	986	2,711	2,670	2,657	2,697	2,676	2,466
Transportation equipment, total.....	8,251	8,120	7,916	8,103	6,302	7,067	15,139	15,177	15,154	15,229	15,152	14,016
Motor vehicles and parts.....	4,840	4,665	4,484	4,681	2,955	4,018	9,404	9,237	9,306	9,261	9,245	8,486
Aircraft, missiles, and parts.....	2,723	2,764	2,766	2,747	2,697	2,527	9,333	9,081	8,956	9,228	9,073	8,019
Instruments and related products.....	1,204	1,182	1,101	1,280	1,166	1,062	2,399	2,412	2,407	2,395	2,433	2,064
All other durable goods industries.....	3,007	3,010	3,144	3,209	3,193	3,166	5,772	5,712	5,624	5,702	5,697	5,071
Nondurable goods industries, total.....	24,699	24,371	24,787	25,815	24,656	24,546	32,203	32,004	31,725	31,799	31,721	30,268
Food and kindred products, total.....	8,259	8,156	8,114	8,711	8,159	8,251	7,347	7,367	7,296	7,334	7,244	7,411
Meat products.....	1,784	1,800	1,835	1,823	1,814	1,751	809	796	747	750	718	659
Tobacco products.....	443	432	425	456	453	423	2,240	2,251	2,230	2,164	2,107	2,144
Textile mill products.....	1,725	1,785	1,789	1,848	1,852	1,981	3,620	3,586	3,509	3,532	3,551	3,389
Paper and allied products, total.....	2,236	2,234	2,333	2,310	2,264	2,186	2,523	2,469	2,486	2,495	2,489	2,306
Pulp, paper, etc.....	945	972	997	956	986	919	968	945	958	956	945	928
Chemicals and allied products, total.....	4,116	4,100	4,118	4,263	4,040	4,204	6,454	6,418	6,395	6,345	6,386	5,693
Industrial chemicals, except pigments....	1,384	1,402	1,400	1,395	1,381	1,328	2,249	2,213	2,178	2,209	2,182	1,929
Petroleum and coal products.....	2,131	2,071	2,030	2,146	2,088	1,897	2,119	2,075	2,078	2,150	2,090	2,113
Rubber and plastics products, n.e.c.....	1,421	1,352	1,395	1,419	1,311	1,221	1,893	1,885	1,851	1,859	1,856	1,703
All other nondurable goods industries.....	4,368	4,241	4,583	4,662	4,489	4,383	6,007	5,953	5,880	5,920	5,998	5,509
	New orders						Unfilled orders					
All manufacturing industries:												
Total.....	56,887	54,799	55,793	58,510	53,001	53,605	89,496	89,014	89,456	90,030	89,493	84,358
Total, excluding transportation.....	48,961	47,142	48,239	50,356	46,983	46,372	57,163	56,356	56,335	57,140	56,653	51,091
Durable goods industries, total.....	32,194	30,482	31,069	32,729	28,420	29,052	86,470	85,984	86,369	87,005	86,435	81,318
Primary metals, total.....	5,328	5,001	5,161	5,005	4,672	3,877	8,072	7,718	7,456	7,566	7,465	5,334
Blast furnaces, steel mills.....	2,583	2,370	2,510	2,346	2,170	1,539	4,276	4,004	3,810	3,869	3,768	2,339
Fabricated metal products.....	3,435	3,091	3,197	3,452	3,141	3,122	10,453	10,231	10,175	10,467	10,345	9,127
Machinery, except electrical, total.....	6,084	5,513	5,433	5,922	5,219	5,056	16,866	16,494	16,487	16,855	16,579	14,432
Engines and turbines.....	865	501	540	871	537	425	4,489	4,295	4,385	4,609	4,379	3,939
Construction, mining, and material handling equipment.....	727	704	664	680	640	709	2,130	2,098	2,040	2,083	2,087	1,626
Metalworking machinery.....	341	274	314	324	283	313	1,895	1,890	1,939	1,906	1,922	1,821
General industrial machinery.....	529	584	489	512	571	494	1,656	1,641	1,567	1,644	1,654	1,400
Electrical machinery, total.....	3,653	3,707	4,079	4,150	3,607	4,171	12,922	13,120	13,276	13,357	13,282	13,370
Electrical transmission and distribution equipment and industrial apparatus.....	738	687	752	749	647	575	3,369	3,361	3,400	3,371	3,386	3,349
Household appliances, including radio and TV.....	811	720	904	904	773	866	637	604	674	687	667	620
Communication equipment.....	827	1,082	1,242	1,206	1,013	1,488	5,036	5,262	5,299	5,383	5,268	5,674
Transportation equipment, total.....	7,926	7,657	7,554	8,154	6,018	7,233	32,333	32,658	33,121	32,890	32,840	33,267
Aircraft, missiles, and parts.....	2,213	2,468	2,502	2,610	2,508	2,521	24,965	25,475	25,771	25,398	25,535	27,065
All other durable goods industries.....	5,768	5,513	5,645	6,046	5,763	5,593	5,824	5,763	5,854	5,870	5,924	5,788
Nondurable goods industries, total.....	24,693	24,317	24,724	25,781	24,581	24,553	3,026	3,030	3,087	3,025	3,058	3,040
Industries with unfilled orders.....	6,706	6,616	6,856	7,010	6,733	6,721	3,026	3,030	3,087	3,025	3,058	3,040
Industries without unfilled orders.....	17,987	17,701	17,868	18,771	17,848	17,832	-	-	-	-	-	-

- Represents zero.      <sup>P</sup>Preliminary.      <sup>R</sup>Revised.

<sup>1</sup>Adjusted for trading-day and calendar month variation.

Table 2.--VALUE OF MANUFACTURERS' SHIPMENTS, INVENTORIES, AND ORDERS, FOR MARKET CATEGORIES AND SUPPLEMENTARY SERIES

(Millions of dollars)

Industry group	Seasonally adjusted			Without seasonal adjustment <sup>1</sup>			Seasonally adjusted			Without seasonal adjustment		
	Sept. 1969 <sup>P</sup>	Aug. 1969 <sup>R</sup>	July 1969 <sup>R</sup>	Sept. 1969 <sup>P</sup>	Aug. 1969 <sup>R</sup>	Sept. 1968	Sept. 1969 <sup>P</sup>	Aug. 1969 <sup>R</sup>	July 1969	Sept. 1969 <sup>P</sup>	Aug. 1969 <sup>R</sup>	Sept. 1968
	Shipments						Total inventories					
All manufacturing industries, total..	56,406	55,239	55,392	57,969	53,401	52,950	94,209	93,728	93,166	93,411	93,262	86,409
Durable goods industries, total.....	31,707	30,868	30,605	32,154	28,745	28,404	62,006	61,724	61,441	61,612	61,541	56,141
Nondurable goods industries, total.....	24,699	24,371	24,787	25,815	24,656	24,546	32,203	32,004	31,725	31,799	31,721	30,268
Industry groups arranged by market categories:												
Home goods and apparel.....	4,660	4,646	5,017	5,160	5,124	5,040	9,920	9,832	9,732	9,705	9,850	9,003
Consumer staples.....	10,584	10,477	10,508	11,247	10,508	10,546	12,156	12,145	12,001	12,071	11,954	11,639
Equipment and defense products, except automotive.....	9,209	9,177	8,960	9,287	8,687	8,323	24,935	24,600	24,349	24,645	24,453	21,725
Automotive equipment.....	5,464	5,298	5,102	5,303	3,542	4,601	5,077	5,368	5,449	5,246	5,329	5,368
Construction materials, supplies, and intermediate products.....	4,626	4,399	4,404	4,854	4,689	4,457	7,842	7,783	7,832	7,721	7,744	6,863
Other materials and supplies and intermediate products.....	21,863	21,242	21,401	22,118	20,851	19,983	34,279	34,000	33,803	34,023	33,932	31,811
Supplementary series: <sup>2</sup>												
Consumer durable goods industries.....	2,144	2,141	2,280	2,391	2,272	2,219	5,115	5,055	4,961	4,990	5,054	4,528
Machinery and equipment industries.....	6,745	6,457	6,198	6,751	6,045	5,944	15,756	15,662	15,621	15,646	15,575	13,772
Defense products industries (old series).....	4,048	4,143	4,182	4,118	3,993	3,907	12,914	12,621	12,454	12,760	12,595	11,269
Defense products (new series)*.....	2,049	2,141	2,077	2,081	2,063	1,917	7,807	7,690	7,713	7,715	7,669	7,201
	New orders						Unfilled orders					
All manufacturing industries, total..	56,887	54,799	55,793	58,510	53,001	53,605	89,496	89,014	89,456	90,030	89,493	84,358
Durable goods industries, total.....	32,194	30,482	31,069	32,729	28,420	29,052	86,470	85,984	86,369	87,005	86,435	81,318
Nondurable goods industries, total.....	24,693	24,317	24,724	25,781	24,581	24,553	3,026	3,030	3,087	3,025	3,058	3,040
Industry groups arranged by market categories:												
Home goods and apparel.....	4,656	4,547	5,072	5,122	5,021	5,059	2,098	2,117	2,223	2,181	2,228	2,245
Consumer staples.....	10,571	10,470	10,499	11,237	10,502	10,574						
Equipment and defense products, except automotive.....	9,534	8,720	9,195	9,864	8,545	8,880	48,044	47,727	48,173	48,852	48,248	46,669
Automotive equipment.....	5,456	5,310	5,039	5,333	3,586	4,843						
Construction materials, supplies, and intermediate products.....	4,914	4,459	4,479	4,980	4,639	4,544	10,661	10,373	10,312	10,620	10,495	9,465
Other materials and supplies and intermediate products.....	21,756	21,293	21,509	21,974	20,708	19,705	28,693	28,797	28,748	28,377	28,522	25,979
Supplementary series: <sup>2</sup>												
Consumer durable goods industries.....	2,130	2,036	2,346	2,352	2,190	2,240	1,726	1,742	1,846	1,827	1,866	1,791
Machinery and equipment industries.....	7,326	6,245	6,346	7,164	5,991	5,780	24,562	23,982	24,193	24,696	24,285	21,409
Defense products industries (old series).....	3,352	3,773	4,047	4,140	3,743	4,388	30,568	31,264	31,634	31,360	31,339	33,416
Defense products (new series)*.....	1,444	1,464	2,380	1,949	1,466	2,437	20,682	21,288	21,964	21,205	21,337	21,909

\*During 1968 manufacturers in ordnance, communications, aircraft and aircraft parts, and shipbuilding industries began to provide aggregate figures on shipments, orders, and total inventories of work performed for Department of Defense. The results of these reports are included in these new defense series. Since there is no historic data available to develop separate seasonal factors for these reporters, the data has been seasonally adjusted using the factors of these industries. <sup>P</sup>Preliminary. <sup>R</sup>Revised. <sup>1</sup>Shipments and new orders adjusted for trading-day and calendar month variation; unfilled orders and inventories as of end of month. <sup>2</sup>The supplementary series are regroupings of the separate industry categories as follows:

- Consumer durable goods industries - Household furniture; kitchen articles and pottery; cutlery, handtools, and hardware; household appliances; ophthalmic goods, watches, and clocks; and miscellaneous personal goods.
- Machinery and equipment industries - Machinery, except electrical (excluding farm machinery and equipment and machine shops), electrical machinery (excluding household appliances, communication equipment and electronic components), shipbuilding and repairing, and railroad and street car equipment.
- Defense products industries (old series) - Based on reports for companies classified in the communication equipment, complete aircraft, aircraft parts, and ordnance industries. (Thus, this series includes significant amounts of nondefense work in these industries and omits defense work performed in the shipbuilding industry.)
- Defense products (new series) - Based on separate reports on defense work filed by large defense contractors in the following industries: ordnance, communications, complete aircraft, aircraft parts, and shipbuilding. Thus, it differs from the old series in that it includes defense activity in shipbuilding and excludes non-defense work in ordnance, communications, complete aircraft, and aircraft parts. The data are comparable to those published annually in the MA-175, Shipments of Defense-Oriented Industries, for the specified industries.

Table 3.--MANUFACTURERS' SHIPMENTS, INVENTORIES, AND ORDERS MONTH-TO-MONTH AND LONG TERM PERCENT CHANGES

(Based on seasonally adjusted data)

Item and industry group	Month-to-month-1969			Average, 1963-1968		Average monthly rates of change		
	Aug.- Sept.	July- Aug.	June- July <sup>r</sup>	Average rise	Average decline	3 months	6 months	12 months
						June- Sept. 1969	March- Sept. 1969	Sept. 1968- Sept. 1969
Shipments:								
All manufacturing industries.....	+2.1	-0.3	+1.1	+1.4	-1.1	+1.0	+1.0	+0.8
Durable goods industries, total.....	+2.7	+0.9	+1.6	+2.1	-2.0	+1.7	+1.2	+1.1
Nondurable goods industries, total.....	+1.3	-1.7	+0.6	+1.0	-0.5	+0.1	+0.8	+0.4
Total inventories:								
All manufacturing industries.....	+0.5	+0.6	+1.0	+0.7	-0.2	+0.7	+0.7	+0.7
New orders:								
All manufacturing industries.....	+3.8	-1.8	+3.6	+1.8	-1.6	+1.9	+1.1	+0.8
Durable goods industries, total.....	+5.6	-1.9	+6.5	+3.2	-2.4	+3.4	+1.4	+1.1
Nondurable goods industries, total.....	+1.5	-1.6	+0.1	+1.1	-0.6	0.0	+0.8	+0.4
Unfilled orders:								
Durable goods industries, total.....	+0.6	-0.4	+0.5	+1.2	-0.7	+0.2	+0.3	+0.6

Table 4.--RATIO OF MANUFACTURERS' INVENTORIES TO SHIPMENTS AND UNFILLED ORDERS TO SHIPMENTS, BY INDUSTRY GROUP

(Based on seasonally adjusted data)

Industry group	Inventories - shipments ratio				Unfilled orders - shipments ratio <sup>1</sup> (months' backlog)			
	Sept. 1969 <sup>p</sup>	Aug. 1969 <sup>r</sup>	July 1969 <sup>r</sup>	Sept. 1968	Sept. 1969 <sup>b</sup>	Aug. 1969 <sup>r</sup>	July 1969	Sept. 1968
All manufacturing industries, total.....	1.67	1.70	1.68	1.69	2.57	2.62	2.64	2.67
Durable goods industries, total.....	1.96	2.00	2.01	2.02	3.08	3.15	3.20	3.24
Stone, clay, and glass products.....	1.65	1.73	1.77	1.51	(NA)	(NA)	(NA)	(NA)
Primary metals.....	1.60	1.67	1.63	1.89	1.62	1.63	1.56	1.43
Fabricated metals.....	2.00	2.10	2.07	2.14	3.58	3.71	3.64	3.54
Machinery, except electrical.....	2.22	2.29	2.38	2.21	2.95	3.00	3.13	2.84
Electrical machinery.....	2.39	2.35	2.30	2.40	3.36	3.40	3.38	3.65
Transportation equipment.....	1.83	1.87	1.91	1.92	6.23	6.46	6.82	7.06
Instruments and related products.....	1.99	2.04	2.19	2.07	(NA)	(NA)	(NA)	(NA)
Nondurable goods industries, total.....	1.30	1.31	1.28	1.31	0.45	0.45	0.45	0.48
Food and kindred products.....	0.89	0.90	0.90	0.95	(X)	(X)	(X)	(X)
Tobacco products.....	5.06	5.21	5.25	5.40	(X)	(X)	(X)	(X)
Textile mill products.....	2.10	2.01	1.96	1.88	(NA)	(NA)	(NA)	(NA)
Paper and allied products.....	1.13	1.11	1.07	1.10	(NA)	(NA)	(NA)	(NA)
Chemicals and allied products.....	1.57	1.57	1.55	1.43	(X)	(X)	(X)	(X)
Petroleum and coal products.....	0.99	1.00	1.02	1.11	(X)	(X)	(X)	(X)
Rubber and plastics products, n.e.c.....	1.33	1.39	1.33	1.42	(X)	(X)	(X)	(X)

(NA) Not available. <sup>p</sup>Preliminary. <sup>r</sup>Revised. (X) Not applicable.<sup>1</sup>Excludes the following industries with no unfilled orders: Wooden containers; glass containers; metal cans, barrels and drums; motor vehicle assembly operations; foods and related products; tobacco; apparel and related products; chemicals; petroleum and coal products; and rubber and plastics products, n.e.c.

Table 5.--VALUE OF MANUFACTURERS' INVENTORIES, BY STAGE OF FABRICATION, BY INDUSTRY GROUP

(Millions of dollars)

Industry group	Seasonally adjusted			Without seasonal adjustment			Seasonally adjusted			Without seasonal adjustment		
	Sept. 1969 <sup>p</sup>	Aug. 1969 <sup>r</sup>	July 1969 <sup>r</sup>	Sept. 1969 <sup>p</sup>	Aug. 1969 <sup>r</sup>	Sept. 1968	Sept. 1969 <sup>p</sup>	Aug. 1969 <sup>r</sup>	July 1969 <sup>r</sup>	Sept. 1969 <sup>p</sup>	Aug. 1969 <sup>r</sup>	Sept. 1968
	Total						Materials and supplies					
All manufacturing industries, total..	94,209	93,728	93,166	93,411	93,262	86,409	28,866	28,801	28,843	28,900	28,801	28,248
Durable goods industries, total.....	62,006	61,724	61,441	61,612	61,541	56,141	17,035	17,011	17,159	17,315	17,223	16,988
Stone, clay, and glass products.....	2,468	2,453	2,463	2,388	2,419	1,964	790	787	791	792	786	666
Primary metals.....	7,939	7,907	7,800	7,925	7,873	7,488	2,845	2,800	2,760	2,923	2,862	2,952
Machinery (electrical and nonelectrical).	21,855	21,692	21,586	21,608	21,573	19,482	5,240	5,169	5,140	5,254	5,219	4,860
Transportation equipment.....	15,139	15,177	15,154	15,229	15,152	14,016	3,086	3,206	3,444	3,233	3,237	3,603
All other durable goods industries.....	14,605	14,495	14,438	14,462	14,524	13,191	5,074	5,049	5,074	5,113	5,119	4,907
Nondurable goods industries, total.....	32,203	32,004	31,725	31,799	31,721	30,268	11,831	11,790	11,684	11,585	11,578	11,260
Chemicals and allied products.....	6,454	6,418	6,395	6,345	6,386	5,693	2,218	2,216	2,204	2,199	2,214	2,015
Petroleum and coal products.....	2,119	2,075	2,078	2,150	2,090	2,113	475	482	468	475	484	443
Rubber and plastics products, n.e.c.....	1,893	1,885	1,851	1,859	1,856	1,703	602	588	578	613	609	553
All other nondurable goods industries....	21,737	21,626	21,401	21,445	21,389	20,759	8,536	8,504	8,434	8,298	8,271	8,249
	Work in process						Finished goods					
All manufacturing industries, total..	34,302	33,965	33,659	34,176	33,966	30,335	31,041	30,962	30,664	30,335	30,495	27,826
Durable goods industries, total.....	29,256	28,977	28,714	29,103	28,931	25,631	15,715	15,736	15,568	15,194	15,387	13,522
Stone, clay, and glass products.....	400	396	391	381	386	289	1,278	1,270	1,281	1,215	1,247	1,009
Primary metals.....	2,722	2,720	2,687	2,688	2,690	2,452	2,372	2,387	2,353	2,314	2,321	2,084
Machinery (electrical and nonelectrical).	10,503	10,405	10,355	10,448	10,386	9,252	6,112	6,118	6,091	5,906	5,968	5,370
Transportation equipment.....	10,582	10,441	10,232	10,549	10,426	9,108	1,471	1,530	1,478	1,447	1,489	1,305
All other durable goods industries.....	5,049	5,015	5,049	5,037	5,043	4,530	4,482	4,431	4,365	4,312	4,362	3,754
Nondurable goods industries, total.....	5,046	4,988	4,945	5,073	5,035	4,704	15,326	15,226	15,096	15,141	15,108	14,304
Chemicals and allied products.....	940	942	946	944	944	876	3,296	3,260	3,245	3,202	3,228	2,802
Petroleum and coal products.....	494	444	482	502	453	458	1,150	1,149	1,128	1,173	1,153	1,212
Rubber and plastics products, n.e.c.....	324	327	319	330	328	308	967	970	954	916	919	842
All other nondurable goods industries....	3,288	3,275	3,198	3,297	3,310	3,062	9,913	9,847	9,769	9,850	9,808	9,448

<sup>p</sup> Preliminary.<sup>r</sup> Revised.

## Appendix

The following is a description of the survey and definitions used. These are provided to clarify the meaning of the items involved and do not represent any revisions from those definitions previously employed.

### DESCRIPTION OF THE SURVEY

The Manufacturers' Shipments, Inventories, and Orders survey provides monthly figures that are comparable to the annual totals published each year in the annual survey of manufactures (ASM). The ASM is based on a sample of approximately 60,000 manufacturing establishments drawn from the 5-year census universe of about 310,000 establishments. In the ASM, each manufacturing establishment provides data on employment, payrolls, shipments, cost of materials, capital expenditures, and inventories as well as other selected items. The establishments do not provide information on unfilled orders or new orders. Since the ASM is establishment based, it provides data for each of the 425 manufacturing industries in the Standard Industrial Classification System (SIC) and area data for industry groups.

The monthly survey M3-1 does not provide information at the complete SIC industry detail because of the smaller size of the reporting panel and the fact that most companies cannot provide shipments, inventories, and orders data monthly for individual establishments.

The monthly reporting panel consists of approximately 5,000 reporting units and includes virtually all companies with 1,000 or more employees and a sample of the smaller ones. The reporting unit typically comprises the entire operations of a company although many of the larger diversified companies file separate divisional type reports for their operations in different industries.

Most of the reporting units include mixed industry activity even within the broad industry categories of the monthly survey. The survey methodology assumes that the month-to-month changes of the reporting units classified in each industry category represent effectively the month-to-month movements of the establishments in the SIC industries which make up the category. Thus, the monthly reports are used to update the ASM estimates by using a link relative of matched companies in each industry.

### EXPLANATION OF TERMS

**Value of Shipments**--Shipments in the monthly survey are equivalent to value of shipments as reported in the ASM which are received or receivable net selling values, f.o.b. plant, after discounts and allowances and excluding freight charges and excise taxes. Included in shipments are the value of all products sold, transferred to other plants of the same company, or shipped on consignment.

Shipments also include receipts of establishments in the industry for contract work performed for others, resales, receipts for miscellaneous activities such as the sale of scrap and refuse; value of installation and repair work performed by employees of the plant; and value of research and development performed at the plant. In the aircraft industry and shipbuilding, the value of work done in a given year varies considerably from the value of shipments because of the long lead time between the input of the materials and labor and the shipments of the completed aircraft or ship. In the annual survey, therefore, the value of work done during the year is requested rather than the value of shipments.

The value of shipments figures developed from the ASM contain duplication at the all manufacturing and industry group levels since the products of some industries are used as materials by other industries within the industry group. With the exception of motor vehicles, it is not significant at the 4-digit SIC group level. Since the M3-1 industry categories typically are groupings of industries, this duplication is significant for the all manufacturing, durable goods and nondurable goods categories and the various market groups. The significance of the duplication within the specific M3-1 industry groups varies depending on the 4-digit industry composition of these groups. It is most pronounced in a few highly integrated industry areas such as primary metals and motor vehicles and parts.

Since most monthly reports are for the entire company or major divisions rather than establishments, the companies are requested to report net sales, i.e., total company billings after discounts and allowances. Companies which file divisional reports are requested to treat transfers from one division of the company to another as if they were net sales to outside customers. Although this



definition of shipments in the monthly reports differs from that used in the annual establishment reports, it is assumed that the month-to-month changes in company sales in the industry are representative of the month-to-month shipments of the establishments in the industry.

**Inventories**--End-of-month inventories in the monthly survey are identical in definition to the end-of-year inventories in the ASM. In the ASM, respondents are asked to report inventories of individual establishments at approximate current cost if feasible; otherwise, "at book values." Since different methods of inventory valuation are used (LIFO, FIFO, etc.), the definition of the aggregate inventories for establishments in an industry is not precise. The figures on the change in inventories from one period to the next are of greater significance than the actual aggregates.

Inventories are reported by stage of fabrication: (a) finished goods; (b) work in process; and (c) materials, supplies, fuel, and other inventories. In using inventories by stage of fabrication at the all manufacturing and 2-digit industry levels as well as for the durable and non-durable goods sectors, it should be noted that a finished product of one industry may be a raw material for another industry at the next stage of fabrication. Insofar as the durable and nondurable goods sectors and also the 2-digit industry groups contain industries with successive stages of processing, the same type of commodity may be included under different inventory categories in the aggregate statistics.

### **New Orders Received and Unfilled Orders--**

Orders as reported in the monthly survey are net of cancellations during the month. They include orders received during the period and also filled during the period as well as those orders received for future delivery. They also include the net sales value of contract change documents which increase or decrease the sales value of the unfilled orders to which they relate. Orders include only those supported by binding legal documents such as signed contracts, or letter contracts. In case of letter contracts the full amount of the sales value is included if the parties are in substantial agreement on the amount; otherwise, only the funds specifically authorized to be expended are included. The respondent is instructed to deduct the sales value of partial or complete cancellation of existing orders.

Unfilled orders include orders as defined above that have not yet passed through the sales account. Generally, unfilled orders at the end of the reporting period are equal to unfilled orders at the beginning of the period plus net new orders received less net sales.

While both new orders and unfilled orders are used in reviewing individual company reports for consistency, only unfilled orders are estimated directly in the tabulated totals. New orders are derived from the shipments plus net change in unfilled orders for each industry category. This procedure is followed for seasonally adjusted data as well as for the unadjusted data. Shipments and unfilled orders are seasonally adjusted independently. Seasonally adjusted new orders are derived from seasonally adjusted shipments and seasonally adjusted unfilled orders.